

presently on file is respectfully requested. Formal drawing sheets will be submitted subsequent to acceptance of the proposed changes.

IN THE SPECIFICATION

Please amend the specification as follows. A separate marked-up version of the changes to the specification is attached:

Please amend the paragraph beginning on line 10 of page 13 as follows:

D Also represented in Figure 3 are temperature sensors 13 and heating elements 12 which project from the upper socket of the measuring head 1 in the form of a pin or in another suitable form, so that they can be positioned and fixed in a self-closed fashion in connection with correspondingly constructed holding bores in supports or bodies (still to be described).

Please amend the paragraph beginning on line 18 of page 13 as follows:

DL The supports or bodies can be mounted on the otherwise planar surface of the socket by means of an optical cement.

Please amend the paragraph beginning on line 24 of page 13 as follows:

DB Figure 3b shows an example of a measuring head 1 on which, again, a support or body can be mounted. The single or a plurality of heating element(s) can be surrounded by a material 12.1 having good thermal conduction.

Please amend the paragraph beginning on line 13 of page 14 as follows:

D4 The exciting light is now irradiated via optical fibres into at least one of the two end faces of the limbs 30', 30'' into the transparent support 30, and the fluorescence is excited there in the layers 32 by multiple reflection. A portion of the fluorescent light is irradiated again onto the support 30 and, by reflection at the outer surfaces of the support 30, directed onto optical fibres for fluorescent light by the lower end faces of one or both limbs 30', 30'', and the intensity of the fluorescent light is detected by detectors and, consequently, the material concentration can be measured as a consequence of fluorescence quenching.

Please amend the paragraph beginning on line 19 of page 17 as follows:

D5 Figure 11 represents possible variants of the construction of end faces of the supports 30 or of the planar optical conductors into which or from which the exciting light or the fluorescent light can respectively be launched or coupled out, these end faces being correspondingly inclined in all these examples such that the reflection in the limbs 30', 30'' of the supports 30 can be optimized, on the one hand, for the excitation of the fluorescence and, on the other hand, for the alignment of the fluorescent light to be measured.

Please amend the paragraph beginning on line 30 of page 18 as follows:

D6 Such a body 40, which can also be designated as a diffuser plate, can have cutouts or cavities 42 which are dimensioned and arranged such that the body 40 can be mounted on a measuring head 1 as represented, for example, in Figure 3. In this case, the exciting light is radiated into the body 40 by an optical fibre and distributed there diffusely, as a result of which a uniform excitation of fluorescence is achieved in the layers 32 and at least a portion of the fluorescent light is redirected onto the body 40, and directed from there into optical fibres onto the detectors for the purpose of measuring the fluorescence intensity.

Please amend the paragraph beginning on line 33 of page 18 as follows:

D7 It is also possible that the fluorescent light can be launched into optical fibres from an end face of the layer(s) 32, and can thereby be directed onto the detector(s).

Please amend the paragraph beginning on line 25 of page 20 as follows:

D8 A further example of a measuring head 1 according to the invention is represented in Figure 22, in two views. In this case, the exciting light of the light source 2 is launched only on one side into a limb of a support such as is represented in Figures 4 to 15, and coupled out again from the respective other limb or both limbs, and directed onto detectors 4 in order to determine the fluorescence intensity.